

REMARKS

New Remarks in Response to the Notice of Non-Compliant Amendment

This Amendment being filed in response to the Notice of Non-Compliant Amendment dated February 12, 2009 is basically a copy of the substance of the Amendment that the undersigned attorney had attempted to file by fax on November 17, 2008. Those fax transmissions were only partially received by the PTO. The undersigned attorney had also mailed a complete copy of the Amendment to the PTO on November 17, 2008 using a Certificate of Mailing and has a receipt card from the PTO indicating that the complete copy of the Amendment was actually received. However, this complete copy of the Amendment was not entered into the Image File Wrapper (IFW) and has apparently been lost. Thus, the IFW contains only the partial faxed copies of the Amendment dated November 17, 2009. The presences of only the partial faxed copies resulted in the mailing of the Notice of Non-Compliant Amendment.

Accordingly, this Amendment being submitted in response to the Notice of Non-Compliant Amendment is being made to enter into the IFW the complete copy of the Amendment that the undersigned attorney had attempted to file both by fax and by the US mail on November 17, 2008. All of the remaining remarks contained herein set forth verbatim the remarks from the Amendment of November 17, 2008 that were pertinent to the Office Action of May 15, 2008.

Remarks from the Amendment of November 17, 2008 Responding to the Office Action of May 15, 2008

The Office Action of May 15, 2008 by Examiner Vanaman has been carefully reviewed by the undersigned attorney.

Amended Claim 1

In the Office Action of May 15, 2008, Examiner Vanaman stated that the features which had been argued for the patentability of claim 1 were “not actually recited in the claims to the detail that they are asserted in the discussion.” Claim 1 has been further amended herein to correct this omission.

As amended, claim 1 now calls for a

“switch (that) is selectively operable only under the manual control of a user of the machine to allow only the user to select when the battery power source shall serve as the sole source of electric power for the electric motors.”

In addition, the nature of the lock-out feature has been further described with more particularity. Specifically, claim 1 now recites that

“the lock-out means only prevents operation of the electric motors without the lock-out means automatically restarting the engine **such that restarting the engine remains solely under the manual control of the user with the user being required to selectively restart the internal combustion engine at a time solely of the user’s choosing to permit continued operation of the electric motors.**” (Emphasis Added)

In claim 1, the purely manual nature of the switch is now set forth and the user control over the restarting of the engine is now clearly set forth. Neither of these limitations is taught by Arendt. Accordingly, claim 1 and its dependent claims are allowable.

Amended Claim 24

The term “genset” in this application refers to the combination of the internal combustion engine and the generator. See page 7 of the specification, Lines 1 and 2. In addition, the specification further describes a switch 74 that activates the genset so that energy comes both from the genset and the battery pack (the hybrid mode of operation) or that deactivates the genset so that energy

comes only from the battery pack (the all battery mode of operation). See page 12 of the specification, the second full paragraph, which reads in pertinent part as follows:

“When switch 74 is depressed towards the symbol 76 representing the internal combustion engine, genset 143 is activated so that energy is available to the electric motors 118 and 136 from both genset 143 and the battery pack 144. Conversely, when switch 74 is depressed towards the symbol 78 representing a battery, genset 143 is deactivated so that energy is available to the electric motors 118 and 136 only from battery pack 144. Accordingly, switch 74 may be selectively manipulated by the operator to switch from one mode of operation to another.” (Emphasis Added)

The nature of the switch that can be used by the operator to select either the hybrid mode or the all battery mode of operation has now been more particularly recited in amended claim 24. As amended, claim 24 now requires a switch

“having two positions for selecting between the hybrid and all battery modes of operation with the switch in one position thereof deactivating the engine to enter the all battery mode of operation and the switch in the other position activating the engine to enter the hybrid mode of operation, wherein the switch is selectively actuable only by manual control by a user of the machine such that only the user is able to switch back and forth between the hybrid and all battery modes of operation by the user manually moving the switch back and forth between the two positions thereof.” (Emphasis Added)

Clearly, given the automatic nature of Arendt's switch, Arendt does not disclose a switch that is selectively actuable only by manual control by a user of the machine. Arendt's switch is also intended to be automatically operable in response to the state of charge of the battery. Given that this is the Examiner's rationale for combining Arendt with Reimers, it would not be obvious from Reimers or Arendt to have the purely manual mode selecting switch now set forth

in claim 24. Accordingly, amended claim 24 is allowable for the reasons noted above.

The Examiner's 35 USC 112 Rejection of Claim 25 is Traversed

The Examiner has taken out of context the statement that the “engine 40 is coupled only to generator 42” by ignoring the following sentence of the specification and by ignoring the overall context of the application, namely the description of a hybrid electrically powered mower. Specifically, the portion of the above-identified application quoted by the Examiner, including the following sentence, reads as follows:

“Engine 40 is coupled only to generator 42. **It does not drive the traction wheels 6a and 6b or any of the cutting units 30 directly.**” (Emphasis Added)

When the Applicant described the engine as being coupled only to the generator, he was simply trying to contrast an engine that was used for generating electrical power (that electrical power subsequently being used to drive the traction wheels and the cutting units via electric motors), from an engine that itself directly drove the traction wheels and the cutting units through various drive trains. The Applicant did not literally mean that the engine was coupled to just a generator or that the engine could not, for example, also be connected to a starter motor. The Applicant was only contrasting the electrical power producing engine of a genset from an engine that was being used to mechanically power the traction wheels and the cutting units. This is clear when the two sentences reproduced above are read together. The second sentence provides the needed context for the first sentence.

In addition, one of ordinary skill in the art would have understood as of the effective filing date of this application that **the engine in a genset combination would typically include a separate starter motor for starting the engine.** The specification of the application refers to the use of a particular Onan genset

as being a genset that could be used in the invention. Specifically, the specification states as follows at Page 7 of the specification, Lines 7-9:

“One type of genset 43 that can be used is an **Onan Microlite 48V DC genset developing 4000 watts of power** with a 9 HP internal combustion engine 40.” (Emphasis Added)

Attached hereto is the Onan Microlite 4000 brochure, dated March 1994, that the Applicants had in their possession at the time their original provisional application was filed in 1996. Note that such genset was started by a separate automotive starter coupled to the engine, and NOT by creating a short circuit in the generator and using the generator as a starter motor. See the following references to the automotive starter in pages 1 and 2 of the Onan Microlite 4000 brochure.

Standard Features

- Capped Electronic Voltage Regulator
- 4-Point Mounting System with Vibration Isolators
- Integral Enclosure Cover with Sheet Steel Base
- Stationary Exhaust Pipe Attachment Point
- Remote Start Connector
- Automotive Type Starter with Automatic Start Disconnect Circuit
- Fuel Filter
- Electronic Magneto Ignition
- USDA Forest Service Approved Spark Arrestor
- Cross Flow Pressure Cooling
- Magnetic Circuit Breaker
- Fused DC Circuits to Protect Set Wiring and Remote Start Wiring

Starting System: Remote. 12-volt, 3-wire negative ground

Automotive Type Starter with environmentally protected pinion

Automatic Start Disconnect

Connector for remote start cable

Start-Stop Rocker Switch on control

Given the knowledge of one of ordinary skill in the art about the Onan Microlite 4000 genset, and the fact that it had (as most gensets had) a separate automotive type starter for starting the engine, one of ordinary skill in the art would have understood that the engine in the genset in the hybrid system disclosed in the application was started by a separate starter motor and not by using the generator of the genset. This is reinforced by the application's further disclosure of a rocker switch 74 for activating and deactivating the genset – directly analogous to the start-stop rocker switch disclosed above in the Onan Microlite 4000 brochure as part of the engine starting system.

For all the reasons noted above, the invention set forth in claim 25 was clearly within the Applicant's possession at the time of the original filing and there is sufficient written disclosure of that invention under 35 USC 112 given the specific references to the Onan Microlite 4000 genset. Accordingly, the 35 USC 112 rejection of claim 25 is improper and should be withdrawn.

Amended Claim 33

Claim 33 has been amended to also set forth the symbols 92 that are arranged on the display in the same side by side and front to back staggered configuration as the cutting units in the ganged configuration carried on the frame of the mower. The current draw indicators make the most sense when positioned adjacent their corresponding symbols. This interaction between the symbols representing the cutting units and the current draw indicators for the

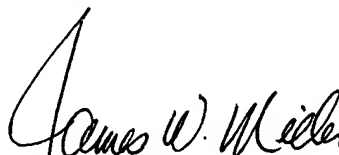
cutting units is not taught or suggested in the art. Accordingly, claim 33 as amended is also allowable.

Summary

The claims remaining in this application are allowable over the prior art. Accordingly, allowance of this application and passage to issue are respectfully requested.

March 5, 2009

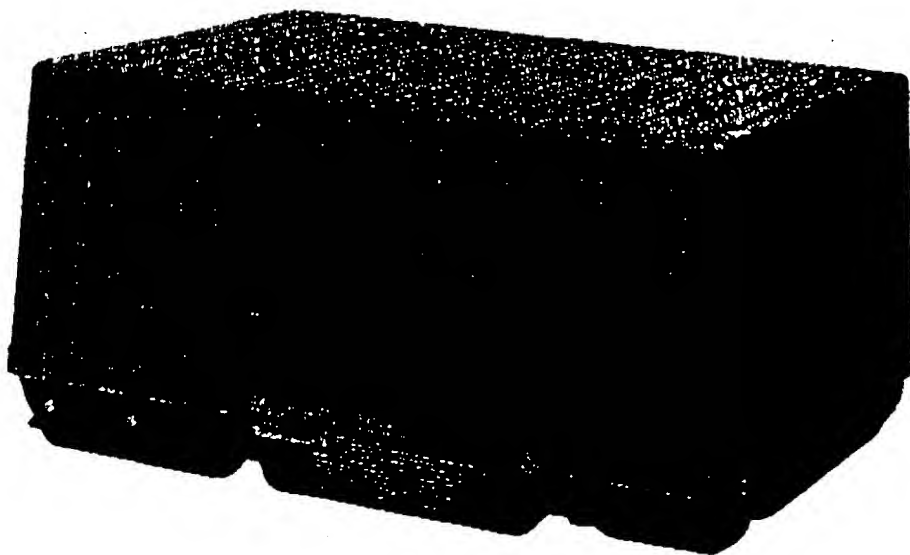
Respectfully submitted,

A handwritten signature in cursive script, reading "James W. Miller". The signature is written in black ink and is positioned above a horizontal line.

James W. Miller
Registration No. 27,661
Suite 1960 Rand Tower
527 Marquette Avenue
Minneapolis, MN 55402
Telephone (612) 338-5915



MicroLite™ 4000 GenSet



RV GenSet

- Lightweight ■ Air Cooled ■ Gasoline or LP Fueled
- Single-Side Service ■ Overhead Valve Engine
- Enclosed Muffler - Quiet! ■ 3-Year Limited Warranty

Rating and Model

60 Hz 3600 r/min, 4000 watts, 120V, 2-wire, single-phase, remote start, conventional or underfloor mounting.

- 4 KY-FA/26100 (Gasoline Fuel), 33.3A
- 3.6 KY-FA/26120 (Vapor Propane Fuel), 30A
- 4 KY-FR/65697 (100V Gasoline Fuel) 40A

50 Hz 3000 r/min, 3600 watts, 220V, 2-wire, single-phase, remote start, conventional or underfloor mounting. For LPG fuels, derate gasoline figures 10%.

- 3.6 KY-FR/33742 (Gasoline Fuel), 16.4A
- 3.3 KY-FR/26119 (Vapor Propane Fuel), 15A

Weight, Size & Sound Level

- **172 Lbs (78.1 kg)**
- **Length 30 in (762 mm), Width 19.7 in (500.4 mm), Height 13.9 in (351.1 mm)**
- **60 Hz, 56 dB(A) at 50 ft, or 70 dB(A) at 10 ft before installation***
Lower than National Park Service Sound Level Requirements. Can be used in National Parks.
- **50 Hz, 59 dB(A) at 7 m, or 65 dB(A) at 3 m before installation***

*Typical Installation will further reduce sound level

Standard Features

- Capped Electronic Voltage Regulator
- 4-Point Mounting System with Vibration Isolators
- Integral Enclosure Cover with Sheet Steel Base
- Stationary Exhaust Pipe Attachment Point
- Remote Start Connector
- Automotive Type Starter with Automatic Start Disconnect Circuit
- Fuel Filter
- Electronic Magneto Ignition
- USDA Forest Service Approved Spark Arrestor
- Cross Flow Pressure Cooling
- Magnetic Circuit Breaker
- Fused DC Circuits to Protect Set Wiring and Remote Start Wiring
- High Stability Mechanical Governor
- Automatic Choke
- Electronic Fuel Pump (Gasoline)
- Positive Fuel Safety Shutoff (3 PSI) (Gasoline)
- Low Oil Level Shutdown
- 30-amp Overcurrent Protector (60 Hz)
- Automatic Carburetor Air Preheater (Gasoline)
- 104 in. (2.6 m) Generator Output Leads
- Electric Fuel Solenoid (LPG)
- Intake Silencer, Sound Deadening Material and Baffles used Reduce Sound Level
- 50 Hz Reconnectable to Other Output Voltages and 3-Wire.

Engine Detail

Model: Onan E095H
Design: 4-Cycle, Overhead Valve, Single Horizontal Cylinder
Compression Ratio: 8.5 to 1
Displacement: 18.5 in³ (303 cm³)
Maximum Power at 60 Hz:
 (Gas) - 9.5 bhp (7 kW)
 (LPG) - 8.6 bhp (6.4 kW)
Maximum Power at 50 Hz:
 (Gas) - 8.3 bhp (6.2 kW)
 (LPG) - 7.6 bhp (5.7 kW)
Cooling: Cross Flow Air - Pressure Type
Cooling Air Volume: 60 Hz - 300 cfm (8.5 m³/min)
 50 Hz - 250 cfm (7.1 m³/min)
Fuel System:
 Combustion Air Volume
 at 60 Hz: 19 ft³/min (0.5 m³/min)
 at 50 Hz: 16 ft³/min (0.45 m³/min)
 KY (Gas) Sidedraft Carburetor
 Electronic Fuel Pump with positive fuel shutoff
 (3 psi), fuel lift 3 ft (914 mm)
 Replaceable Dry Element Air Cleaner
 Patented Automatic Choke
 KY (LPG) - Vapor Withdrawal System with demand regulator
Ignition System: Electronic Magneto Type
Starting System: Remote, 12-volt, 3-wire negative ground
 Automotive Type Starter with environmentally protected pinion
 Automatic Start Disconnect
 Connector for remote start cable
 Start-Stop Rocker Switch on control

Average Fuel Consumption:

Load	Gasoline			
	60 Hz 4.0 KY		50 Hz 3.6 KY	
	g/h	l/h	g/h	l/h
No	0.29	1.10	0.02	0.08
1/4	0.40	1.50	0.29	1.10
1/2	0.48	1.80	0.37	1.40
3/4	0.55	2.10	0.45	1.70
Full	0.71	2.70	0.58	2.20

Load	Propane			
	60 Hz 3.6 Ky		50 Hz 3.3 KY	
	lbs/h	kg/hr	lbs/h	kg/hr
No	1.54	0.70	1.10	0.5
1/4	1.98	0.90	1.64	0.7
1/2	2.43	1.10	2.20	1.0
3/4	2.65	1.20	2.43	1.1
Full	3.09	1.40	2.87	1.3

Lubrication: Splash type
Oil Capacity: 1.6 qt (1.5 L)
 Low Oil Level Shutdown
 Dipstick
Cylinder-Crankcase: Aluminum alloy with iron cylinder liner cast into the block
 Aluminum alloy oil base
Cylinder Head: Aluminum, valves in head, removable

Generator Detail

Design: Onan, revolving field, AC, 2-pole self-excited. Permanently aligned to engine by a tapered shaft. Drip-proof construction.
Insulation System and Temperature Rise: Meets ANSI/RVIA-EGS-1-1993, BS-4999, and CSA 946 Standards.
Cooling: Direct Drive Centrifugal Blower
 Air Required (included in engine cooling air volume)
 60-Hz: 90 ft³/min (2.5 m³/min)
 50-Hz: 250 cfm (7.1 m³/min)
 Cast Aluminum Housing for excellent heat transfer

Exciter: Capped Electronic Voltage Regulator
Rotor: Laminated Electrical Steel Assembly press fitted to shaft, balanced, skewed for improved waveform.
 Heavy Insulated Copper Wire Windings
 Amortisseur Windings for improved waveform and motor starting
Stator: Laminated Electrical Steel Assembly
 Heavy Insulated Copper Wire Windings
DC Brushes: Electrographic; long life
Bearing: Double Sealed Prelubricated Ball Bearing

GenSet Performance

Air Conditioner Starting: (60 Hz - Gasoline) One 13,500 Btu Air Conditioner with 2000 watt baseload at 500 ft (152.4 m) and 100° F (38°C).

(60 Hz - LPG) One 13,500 BTU Air Conditioner with 1600 watt baseload at 500 ft (152.4 m) and 100° F (38°C).

Frequency and Voltage Regulation: Exceeds requirements of ANSI/EGS-1-1993 and CSA C22.2.

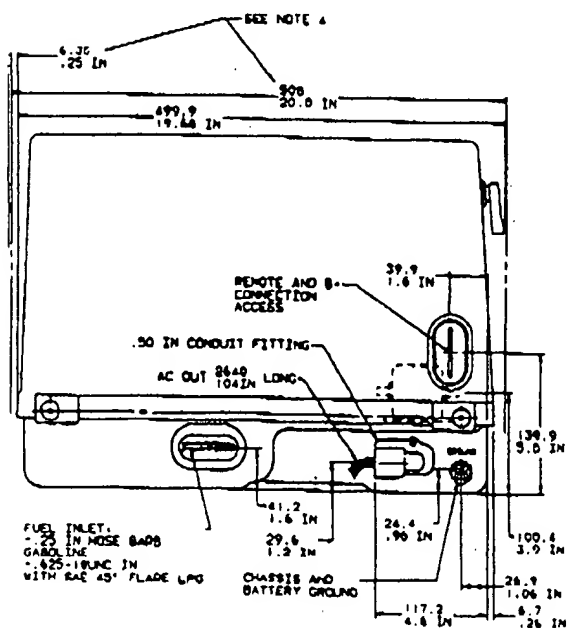
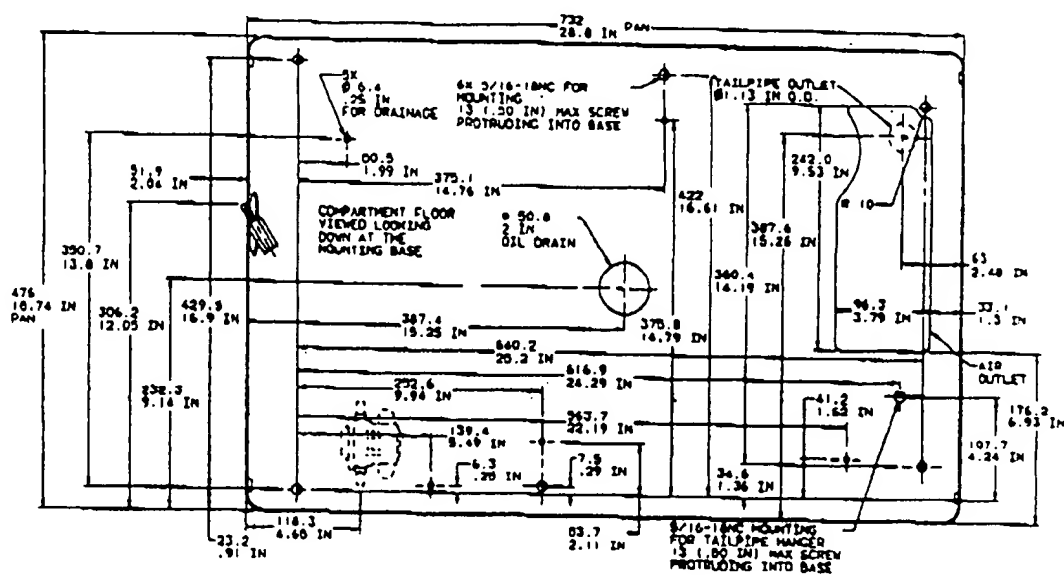
Options and Accessories

- ☐ Standard Underfloor Mounting Kit (P/N 403-3670) bolts through floor
- ☐ Template, (P/N 539-1535-01) to use with the Mounting Kit (P/N 403-3670), may also be ordered
- ☐ Base Adapter Underfloor Mounting Kit (P/N 403-3630). Adapts the MicroLite so it can be mounted from the ends with identical mounting to a Marquis. (Can be used with Marquis housing kit P/N 405-4241 or equivalent.)
- ☐ Housing Kit for Underfloor Mounting (P/N 405-4241) requires base adapter (P/N 403-3630)
- ☐ Battery, 12-volt, 460 cold cranking amps at 0°F (-18°C) (P/N 416-0717)

- ☐ Remote Control On-Off Switch and Plate (P/N 300-2313)
- ☐ Remote Control Panel including On-Off Switch, Hour and Battery Condition Meter (P/N 300-2314)
- ☐ Remote Control Plug and Wire Harness (10 ft - P/N 338-2260-01, 30 ft - P/N 338-2260-02)
- ☐ Exhaust Tailpipe Kit (P/N 155-2845) Tailpipe and Special Hanger
- ☐ Exhaust Kit (1.5 in P/N 155-2847) 90° Elbow
- ☐ Exhaust Kit Adapter (P/N 155-2850) Straight Tube Adapter

Refer to RV Generator Accessories and Service Support Catalog (F-832) for more detailed information

Basic Dimensions



- NOTES:
1. PRIMARY DIMENSIONS ARE MILLIMETERS.
 2. COMPARTMENT ACCESS SHALL ALLOW REMOVAL AND REPLACEMENT OF SERVICE SIDE AND ACCESS TO THE FOLLOWING SERVICEABLE COMPONENTS:

START-STOP SWITCH, FUSE CIRCUIT BREAKER, OIL FILL AND CHECK, OIL BURNER ELECTRIC CABLE AND CHECK ADJUSTERS, SPARKPLUG, VALVE COVERS, START ROLLOUT

3. MIN. UNIT CLEARANCE FROM COMPARTMENT SURFACES:

(a)

TOP	12.5	80 IN
ENGINE END	0.0	82 IN
COX END	0.0	82 IN
SERVICE SIDE	0.0	124 IN
RIGHT SIDE	0.0	88 IN
RIN FREE AIR INLET		
UNIT WEIGHT	172 LB	4024*
 - ** SERVICE SIDE CLEARANCE OF 18 IN. REQUIRED FOR ALIGNMENT OF SET AIR DUCT AND OPENING IN ACCESS DOOR.

IF COMPARTMENT AIR DUCT IS LOCATED ELSEWHERE, 1.80 IN SET 18 IN. REQUIRED. BEHIND SET AND ACCESS DOOR, MIN. 18 IN. RIN FREE AIR DUCT

FOR DETAILED INSTALLATION SEE REQUIREMENTS REC.
151-1520 TEMPLATE-COMPARTMENT
521-1520 TEMPLATE-UNDERPUMP
 4. MINIMUM INSTALLATION SIZE IS 16.4 X 20 X 30.9, AND YANTER 151-1520 TEMPLATE-COMPARTMENT AND SERVICE DOOR ACCESS.

